



Massachusetts DERA Open Solicitation Application Guidance and Grant Requirements

Program Background

The Massachusetts Department of Environmental Protection (MassDEP) is issuing a grant opportunity for diesel emissions reduction projects under the U.S. Environmental Protection Agency's (EPA) Diesel Emissions Reduction Act (DERA) program. This is an early replacement program designed to accelerate the retirement of older, less efficient, and more polluting vehicles. Diesel emissions can result in serious health conditions like asthma and respiratory illnesses and exacerbate global climate change, and often disproportionately affect environmental justice communities that already are impacted by environmental hazards.

MassDEP is committed to advancing equity, diversity, and environmental justice (EJ)¹ through its public investments. The agency seeks to prioritize the direction of these resources to benefit EJ communities and to address environmental inequities. To that end, MassDEP grant and funding programs include criteria and evaluation parameters that emphasize equity, diversity, and environmental justice, consistent with each program's statutory authority and source of funding.

MassDEP has approximately \$2.083 million available for this new DERA Open Solicitation under the [2019-2020 Diesel Emissions Reduction Act \(DERA\) State Grants Program Guide](#) rules.

Eligible diesel vehicles, engines and equipment include, but are not limited to, the following diesel emission source types:

1. Buses
2. Medium-duty or heavy-duty trucks
3. Marine Engines
4. Locomotives
5. Nonroad engines, equipment or vehicles used in:
 - a. Construction
 - b. Handling of cargo (including at a port or airport)
 - c. Agriculture
 - d. Mining
 - e. Energy production (including stationary generators and pumps)

The eligible mitigation technologies that can be applied to the above vehicles, engines and equipment include:

1. Diesel Engine Retrofit Technologies (includes exhaust controls)
2. Engine upgrades and remanufacture systems
3. Idle reduction technologies
4. Engine replacement
5. Vehicle and equipment replacements
6. Clean alternative fuel conversions

¹ Environmental Justice (EJ) is based on the principle that all people have a right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment. EJ is the equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits.



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Who Can Apply

The DERA Open Solicitation is open to municipal governments, public colleges and universities, and state agencies who can choose to purchase either from a state contract or conduct their own procurement. The DERA Open Solicitation is also open to private entities. For all applicants, equipment eligibility is based on criteria listed in EPA's [2019-2020 DERA Guide](#) as well as proof of operation at least half the time inside Massachusetts.

State contracts that may have eligible equipment include:

[VEH93](#)² - Heavy Duty Vehicles

[VEH102](#)³ - Advanced Vehicle Technology Equipment, Supplies and Services [includes Electric Vehicle Supply Equipment (EVSE) and electric transportation refrigeration unit (eTRUs)]

Contract User Guides for these state contracts can be found at <https://www.mass.gov/service-details/vehicles-transportation-and-road-maintenance>.

How to Apply

This is a competitive application based on selection criteria. Applications must be submitted online as detailed below. To be considered for funding, applications must be received by **5:00 p.m., July 12, 2021**. Each piece of equipment will be evaluated independently. If you have questions about this application, please contact Cayla Paulding at cayla.paulding@mass.gov.

There is a mandatory cost-share required that each applicant must pay from non-federal funds, which differs by equipment category, see the table on pg. 27 of the [2019-2020 DERA Guide](#).

Project Application - Applicants must complete the online form at: https://massgov.formstack.com/forms/dera_project_application_form to provide contact information, describe the proposed project, identify existing and desired replacement equipment, and upload supporting documents. Required information includes equipment and project information such as:

1. Existing equipment identification numbers and other identifying and operational information
2. New equipment models and cost information
3. Vehicle routes and annual vehicle miles traveled
4. Annual fuel use and operating hours
5. Emissions Reductions (see Emissions Calculations section on pg. 11 of this document)

² <https://www.mass.gov/media/1128341>

³ <https://www.mass.gov/media/1133201>



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Document Upload – All applicants must upload the following documents as part of the online application form. Additional documents may be required depending on your project type. You may also upload additional documents believed to support the application.

1. IRS W9 Form
2. Itemized cost quotes
3. Where applicable, proof of existing equipment operation primarily (>50% of the time) in Massachusetts for at least the last two years
 - Acceptable proof is the two most recent copies of the MA vehicle inspection report (available at <https://www.mavehiclecheck.com/apps/vir-lookup-tool>) or, for non-inspected equipment, at least two years of operational or fuel records. If only the most recent vehicle inspection report is available, that, in addition to the vehicle's MA registration, is acceptable.
4. Diesel Emissions Quantifier output or alternative emissions accounting methods if applicable

The maximum size limit for uploaded materials is 25 megabytes total, including all supplemental documents.

More Information

Eligibility tables are provided below. Applicants should refer to the [2019-2020 Guide](#) for more details. Eligible diesel vehicles, engines and equipment are listed on page 6 of the 2019-2020 Guide, with the eligible emissions reduction solutions (e.g., equipment replacements) following.

Funding restrictions exist; see section IX of the 2019-2020 Guide beginning on page 19. In addition, the engine, vehicle, or equipment being replaced must be scrapped or rendered permanently disabled; see section IX.G.4. Tables 2-5 in the 2019-2020 Guide lay out the eligible equipment by year and/or tier and Table 6 lists the funding limits and mandatory cost-shares required of grantees.

Costs based on quotes received must be entered into the online form, including the percentage and amount of funding sought, not to exceed the maximum allowed under the 2019-2020 Guide.

MassDEP may contact the applicant for clarification or supplemental information. Applicants will have 15 calendar days to respond to any such request; if the requested information is not timely received, MassDEP may not consider the grant application. MassDEP will evaluate and select projects based on a complete grant application, and any requested clarifying or supplemental information subsequently provided.

The submission of an application does not constitute an award or guarantee funding. Vehicles, engines, and equipment must not be ordered until the Grantee receives an approval letter from MassDEP. MassDEP reserves the right to grant only a portion of the maximum allowable funds per project, and to not award grant funding for the entire \$2.083 million offered.



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Project Selection Criteria

Applicants must answer the questions in the online grant application that specifically address the criteria below, where applicable, listed in no particular order of importance, except that projects providing a credible timeline for completion by September 30, 2021 may be given higher priority. While the criteria provided in this section are the primary means of determining whether to select a proposed project, in certain instances MassDEP reserves the right to also consider other factors not included in these criteria when making its final selection of projects for funding. To ensure the best possible consideration of your application, applicants must answer questions about how your project will:

- **Help the Commonwealth Reduce Air Pollution and Achieve GHG Emissions Reduction Targets in the Transportation Network** – MassDEP will consider projects' estimated emissions reductions (see further details in Emissions Calculations section below).
- **Promote Electrification of Diesel Vehicles and Equipment** – MassDEP will consider whether the proposed project furthers electrification of diesel vehicles and equipment in Massachusetts.
- **Promote Advanced Technologies in the Transportation Network** – MassDEP will consider whether the proposed project promotes advanced technologies in the transportation network in Massachusetts.
- **Serve Environmental Justice (EJ) Populations** – MassDEP seeks projects that provide environmental benefits and reduce environmental burdens in EJ areas in the Commonwealth.
- **Promote Equitable Geographic Distribution Across the State** – MassDEP seeks to promote the equitable distribution of funding across the state. Geographic areas are defined as the four [MassDEP Regional Service Areas](#).⁴
- **Utilize businesses certified with the Supplier Diversity Office** – MassDEP seeks to promote applicants, site hosts or vendors listed as a certified business. More details about eligibility can be found on <https://www.mass.gov/supplier-diversity-office>.
- **Be completed early, by September 30, 2021.**
- **Yield Additional Benefits** – In reviewing proposed projects, MassDEP may consider additional factors, including, but not limited to:
 - The project's implementation timeline, including the level of project implementation detail and feasibility
 - Whether the project operates in a densely populated area
 - Whether the applicant commits to contributing more than the required cost share

⁴ <https://www.mass.gov/service-details/massdep-regional-offices-by-community>



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- Whether the project involves unique or replicable technologies or policies (e.g., the applicant would be willing to share acquisition and testing processes, written policies, data collected on the use of a new technology, etc.)
- The project's societal co-benefits, such as the promotion and support of public health, economic health and diversity, and other desirable outcomes
- The project's cost effectiveness for nitrogen oxides, hydrocarbons, carbon monoxide, particulate matter (PM_{2.5}) and/or carbon dioxide reductions achieved (comparatively lower dollars spent per ton of emissions reduced, as calculated by the DEQ, see page 11 of this document).



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Eligibility Charts

Use the charts below to determine whether your equipment is eligible for funding under the 2019-2020 Guide. Table numbers are as listed in the 2019-2020 Guide. Additional eligibility restrictions exist as noted.

Table 2: Medium and Heavy-Duty Trucks, Transit Buses, and School Buses Funding Restrictions							
Current Engine Model Year (EMY)	DOC +/- CCV	DPF	SCR	Verified Idle Reduction, Tires, or Aero-dynamics	Vehicle or Engine Replacement: EMY 2016+ (2013+ for Drayage)	Vehicle or Engine Replacement: EMY 2016+ Zero Emission or Low-NOx	Clean Alternative Fuel Conversion
Older - 1995	No	No	No	No	No	No	No
1996 - 2006	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2007 - 2009	No	No	Yes	Yes*	Yes	Yes	Yes
2010 - Newer	No	No	No	Yes*	No	Yes	Yes

*Auxiliary Power Units and generators are not eligible on vehicles with EMY 2007 or newer

Note there are more restrictions, please refer to the 2019-2020 Guide, pg.23

Table 3. Nonroad Engine Funding Restrictions							
Current Engine Horsepower	Current Engine Model Year (EMY) and Tier	Vehicle/Equipment Replacement: EMY 2019+					Verified Retrofit
		Compression Ignition			Spark Ignition	Zero Emission	
		Tier 0-2	Tier 3-4i	Tier 4	Tier 2		
0-50	2006 and Newer: Unregulated - Tier 2	No	No	Yes	Yes	Yes	Yes
51-300	1996 and Newer: Tier 0 - Tier 2	No	Yes*	Yes	Yes	Yes	Yes
51-300	1996 and Newer: Tier 3	No	No	Yes	Yes	Yes	Yes
301+	1986 and Newer: Tier 0 - Tier 2	No	Yes*	Yes	Yes	Yes	Yes
301+	1986 and Newer: Tier 3	No	No	Yes	Yes	Yes	Yes



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Table 3 Continued. Nonroad Engine Funding Restrictions						
Current Engine Horsepower	Current Engine Model Year (EMY) and Tier	Engine Replacement: EMY 2019+				Verified Engine Upgrade
		Compression Ignition		Spark Ignition	Zero Emission	
		Tier 0 – 3	Tier 4	Tier 2		
0-50	2006 and Newer: Unregulated - Tier 2	No	Yes	Yes	Yes	Yes
51-300	1996 and Newer: Tier 0 - Tier 3	No	Yes	Yes	Yes	Yes
301-750	1986 and Newer: Tier 0 - Tier 3	No	Yes	Yes	Yes	Yes
751+	1986 and Newer: Tier 0 - Tier 2	No	Yes	Yes	Yes	Yes

*Tier 3 and Tier 4 interim (4i) allowed for vehicle/equipment replacement only when Tier 4 final is not yet available from OEM for 2019 model year equipment under the Transition Program for Equipment Manufacturers (TPEM).

**Previous engine model year engines may be used for engine replacement if the engine is certified to the same emission standards applicable to EMY 2019.

Note there are more restrictions, please refer to the 2019-2020 Guide, pg.24

Table 4: Marine Engines Funding Restrictions						
Current Engine Tier	Vessel or Engine Replacement: EMY 2019+ *				Certified Remanufacture System	Verified Engine Upgrade
	Compression Ignition		Spark Ignition	Zero Emission		
	Tier 1 - 2	Tier 3 - 4				
Unregulated – Tier 2	No	Yes	Yes	Yes	Yes	Yes
Tier 3 - 4	No	No	No	Yes	No	No

*Previous EMY engines may be used if the engine is certified to the same emission standards applicable to EMY 2019

Note there are more restrictions, please refer to the 2019-2020 Guide, pg.24



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Table 5: Locomotive Engines Funding Restrictions						
Current Locomotive Tier	Locomotive Replacement or Engine Replacement: EMY 2019+* or Zero Emission			Verified Retrofit	Idle-Reduction Technology	Certified Remanufacture System
	Tier 0+-3	Tier 4	Zero Emission			
Unregulated - Tier 2	No	Yes	Yes	Yes	Yes**	Yes
Tier 2+ switcher	No	Yes	Yes	Yes	Yes**	Yes
Tier 2+ line haul	No	No	No	Yes	Yes**	Yes
Tier 3- Tier 4	No	No	No	No	No	No

*Previous engine model year engines may be used if the engine is certified to the same emission standards applicable to EMY 2019.

**Automatic Engine Start-Stop technologies are only eligible to be installed on locomotives currently certified to Tier 0 or unregulated.

Note there are more restrictions, please refer to the 2019-2020 Guide, pg. 25-26



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General Procedures and Requirements of Grant Implementation

Technology Acquisition and Installation Process

- After Grantee receives an emailed approval letter from MassDEP, Grantee and MassDEP must sign a *Commonwealth of Massachusetts - Standard Contract Form*. Other required documents include the *Commonwealth Terms and Conditions*, *Contractor Authorized Signatory Listing*, Form MA W-9 *Request for Taxpayer Identification Number and Certification* (these forms are posted at <https://www.mass.gov/lists/osd-forms#contract-forms-and-attachments-for-all-goods-and-services->) and electronic funds transfer (EFT) form including voided check (<https://www.mass.gov/files/documents/2016/08/ti/authorization-for-electronic-funds-payment-eft.pdf>). An End-User Agreement will be included as an attachment to the *Commonwealth of Massachusetts - Standard Contract Form*.
 - Government Grantees may already be on the Commonwealth contract for goods and services as part of MassDEP's Sustainable Materials Recovery program; if so, the only required document is the End-User Agreement.
- Grantee must coordinate the delivery and, if applicable, installation of the technology directly with the vendor.
- Grantee must submit updates to MassDEP regarding the project implementation schedule every three months or more frequently if requested.
- Project should be completed no later than 9/30/22.
 - Although Grantee may apply for an extension, an extension is not guaranteed. Extension requests must be filed with MassDEP no later than 1 month prior to 9/30/22, along with an explanation for the delay and a plan and timeline for completing the project.

Post-Acquisition and Installation Process

- Grantee must submit a *Payment Request Form* to MassDEP, confirming that the equipment was received and installed, with detailed cost invoices and other required information.
- For government Grantees using the state contracts listed in the *Who Can Apply* section on page 2, payment may be made to Grantee or vendor on state contract, as indicated by Grantee on the *Payment Request Form*.
- For government Grantees conducting their own procurement and not using the state contracts listed in the *Who Can Apply* section on page 2, payment will be made to the government Grantee. It is the responsibility of government Grantees to ensure compliance with all laws, regulations, and other requirements applicable to the acquisition of the equipment.
- For private Grantees, payment will be made as a reimbursement directly to the Grantee.



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- Grantee must scrap the engine and/or vehicle/switcher/non-road equipment and provide proof to MassDEP upon completion per the requirements in the 2019-2020 Guide. Required proof consists of:
 - Digital photos of the Vehicle Identification Number (VIN) tag, side profile of the vehicle, engine tag (showing serial number, engine family number, and engine model year), before and after pictures of the destroyed engine block, and cut frame rails or other cut structural components, as applicable.
 - A certificate from a licensed scrap yard.
 - Additional information regarding scrappage requirements will be included in the End-User Agreement.
- After completion of the acquisition or installation of the vehicle/equipment, Grantee agrees to allow MassDEP, or MassDEP's designated representative, access to the location of the vehicle/equipment during normal business hours and, in the case of vehicles, at a location mutually convenient for Grantee and MassDEP so that MassDEP can verify the acquisition. Such access shall be provided within a reasonable time after request by MassDEP, not to exceed 3 weeks.
- Scrappage must be complete for funds to be disbursed.
- Grantee must handle its cost-share directly with the vendor and submit a copy of the payment to MassDEP.
- Once MassDEP receives documentation that the equipment is in place and the cost share payment has been made, and, in some cases, after MassDEP has conducted an inspection, payment to Grantee or vendor will be initiated.
- Grantee must operate the new engine or equipment for at least 3 consecutive years.
- Grantee must operate the new engine or equipment for at least half of the time inside Massachusetts.
- Grantee must collect data on its equipment, including data on actual use and documentation of operation inside Massachusetts, for the 3-year period it is required to operate the equipment.
 - Grantee must submit such data to MassDEP upon request.



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Emissions Calculations

Applicants must use the EPA's [Diesel Emissions Quantifier](https://cfpub.epa.gov/quantifier/index.cfm?action=main.home)⁵ (DEQ) to calculate emissions reductions for projects.

Step by Step Instructions:

1. Sign up for an account (if you do not have one).
2. Click on the blue *Create New Project* button.
3. On *Create New Project* page, name your project and select your project's *Type*.
 - Engines: **This field only comes up if you select Marine under the Type field.** The DEQ allows applicants for marine engine upgrades to enter up to 5 engines at a time, however, since each engine will be evaluated individually, you must select a quantity of 1, and run the DEQ separately for each different propulsion or auxiliary engine for which you are seeking funding.
4. Total Project Costs: Users should enter data on equipment and installation costs associated with a project.
5. Select Save Project.
6. On the new page that opens up (*Update Project Information*) click on the blue *Add a Vehicle or Engine Group* bar.
 - If you are applying for a marine vessel engine, *Add an Engine Group* may not be visible on the bar but will work when clicked.
7. Select your equipment type from the list under the bar.
8. Under *Onroad Vehicle*, a "long haul" combination or single unit makes trips of over 200 miles; a "short haul" makes trips of 200 miles or less.
9. Fill in the fields on the new page that opens (*New Vehicle Group*), using actual data for the most recent year you have.
 - Quantity: The quantity must be 1 since you must run the DEQ for each piece of equipment separately.
 - If you need to use a default for any data point, select Get Default Value.
 - *Remaining Life of Baseline*: Always click on *Get Estimated Remaining Life* to the right of the box.
10. Click on *Save Group* at the bottom of the page (the DEQ uses the term "Group" even when the quantity is one).
11. On the next page (*Group Name*:) click on the blue bar *Add an Upgrade*.
 - Click on the most appropriate of the choices that appear under *Replacements*. You will be taken to a new page.
12. Fill out the fields on the new page that opens (*Add an Upgrade*).
 - *Annual Diesel Gallons Reduced* (per engine):
 - To estimate the annual diesel gallons reduced, take the expected vehicle miles traveled or operating hours of the new equipment and divide by the Vendor's estimate of miles or hours per gallon. That will give you the estimated gallons used by the new equipment.
 - Then subtract that number from the gallons used by the existing equipment. If the upgrade is to all electric, the gallons reduced will be the same as the gallons used by the old equipment.

⁵ <https://cfpub.epa.gov/quantifier/index.cfm?action=main.home>



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13. At the bottom of the page, click the blue *Save Upgrade* button. You are now done entering data.
14. On the *Group Name* page, scroll all the way down to the blue *Quantify Project Emissions* button, and click it to see the *Emission Results* page.
15. On the *Emissions Results* page, scroll down to the heading *Downloading Spreadsheets*, and click on the *Spreadsheet* link to download the Excel spreadsheet of your project.
16. Copy and paste the data from the spreadsheet into the corresponding fields in the online form. *Note – only the annual and lifetime results are required in the form, but the spreadsheet is a required document to be uploaded, with all the information as downloaded.
17. If you need help you can contact the DEQ Helpline: DEQhelp@epa.gov.